CONTENTS

Foreword vii
Contents ix
Design of the Thorney Island continuous release trials
J. McQuaid (Sheffield, Great Britain) 1
The Thorney Island continuous release trials: Mass and flux balances
A. Mercer and C. Nussey (Sheffield, Great Britain) 9
An analysis of the turbulence records from the Thorney Island continuous release trials
A. Mercer and J.K.W. Davies (Sheffield, Great Britain) 21
Analysis of meteorological data for the Thorney Island Phase I trials
J.S. Puttock (Chester, Great Britain) 43
Estimates of the mean concentration and variance for the Thorney Island Phase I dense gas dispersion experiments
K.K. Carn (Liverpool, Great Britain) 75
Overall properties of the heavy gas clouds in the Thorney Island Phase II trials
P.W.M. Brighton and A.J. Prince (Warrington, Great Britain) 103
Analysis and simulation of Thorney Island Trial 34
J.A. Havens (Fayetteville, AR, U.S.A.), P.J. Schreurs (Brussels, Belgium) and T.O. Spicer (Fayetteville, AR, U.S.A.) 139
A statistical examination of wind tunnel modelling of the Thorney Island trials
M.E. Davies and P.N. Inman (Middlesex, Great Britain) 149
A wind tunnel simulation of the Thorney Island Phase II Trial 20
S. Knudsen and P.Å. Krogstad (Trondheim, Norway) 173
Translational cloud speeds in the Thorney Island trials: Mathematical modelling and data analysis
C.J. Wheatley and A.J. Prince (Warrington, Great Britain) 185
Interpretation of the Thorney Island Phase I trials with the box model CIGALE2
B. Cabrol (Fontenay-aux-Roses, France), A. Roux (Rueil-Malmaison, France) and V. Lhomme (Fontenay-aux-Roses, France) 201
3-D Numerical simulation of heavy gas dispersion
Ø. Jacobsen and B.F. Magnussen (Trondheim, Norway) 215
Field test validation of the DEGADIS model
T.O. Spicer and J.A. Havens (Fayetteville, AR, U.S.A.) 231
Comparison between MERCURE-GL code calculations, wind tunnel measurements and Thorney Island field trials
Y. Riou (Chatou, France) 247

FEM3 model simulations of selected Thorney Island Phase I trials
S.T. Chan, D.L. Ermak and L.K. Morris (Livermore, CA, U.S.A.) 267
The calibration of a simple model for dense gas dispersion using the Thorney Island Phase I trials data
R.J. Carpenter, R.P. Cleaver (Solihull, Great Britain), P.J. Waite and M.A. English (London, Great Britain) 293
Comparison of Thorney Island data with heavy gas dispersion models
J.B. Cornwell and D.B. Pfenning (Norman, OK, U.S.A.) 315
A comparison between the variability exhibited in small scale experiments and in the Thorney Island Phase I trials
J.K.W. Davies (Sheffield, Great Britain) 339
The effect of initial potential energy on the dilution of a heavy gas cloud
D.M. Webber and C.J. Wheatley (Warrington, Great Britain) 357
Effects of ground proximity on dense gas entrainment
J.M. Redondo (Cambridge, Great Britain) 381
Fitting box models to the Thorney Island Phase I dataset
S.J. Sherrell (Liverpool, Great Britain) 395
The heavy gas mixing process in still air at Thorney Island and in the laboratory
A.P. van Ulden (De Bilt, The Netherlands) 411
Development and application of heavy gas dispersion models of varying complexity
D.M. Deaves (Epsom, Great Britain) 427
Comparison of Thorney Island data with predictions of HEGABOX/HEGADAS
J.S. Puttock (Chester, Great Britain) 439
A user's critique of the Thorney Island dataset
P.W.M. Brighton (Warrington, Great Britain) 457
Author Index Volume 16 501